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WESTERN FARMER AND GARDENER.

INDIANAPOLIS, SATURDAY, AUGUST 15, 1846.

## LUCERNE.

This admirable plant is very little known in the west. It resembles a clover, and is used for green food for cattle, for which it is peculiarly adapted both by its nutriciousness and its endurance of repeated cuttings. Care must be taken to put it upon the right soil and it will bear mowing four or five times a year, and will last for ten years—with care five years more! The soil for it is a *deep*, a very deep vegetable loam, which drains itself perfectly and yet without becoming dry. It has a fusiform root, which, as the plant grows older, extends downward from four to six feet. The subsoil is regarded by Flemish farmers as of more importance than the surfacesoil. A stiff cold clay, a wet and springy soil; a hard, cold, wet subsoil of any sort, is unfavorable to it. It should therefore be tried on warm, dry, and rich soils, than which none are better than our sandy alluvions or bottom lands. During its first year it requires some care, to keep down weeds, as it is easily smothered; but when once established it rules the soil in defiance of anything. If the ground is *very* clean, it may be sown broadcast: but it is always safer and often *necessary* to drill it. Authors vary as to the quantity of seed required per aker, Von Thaer says six to eight pounds, while his French editor says from sixteen to eighteen. We suppose that from ten to twelve pounds will be a fair amount.

When the plants are well established they will be improved by a severe harrowing every spring: a sharp harrow being used until the field looks as if it were plowed.

Lucerne has been tried by a few cultivators in the west, but by more in the east, with great success, and it has this peculiar excellence, that, thanks to its very long roots, it withstands our severest drouths; indeed, our hottest and dryest summers are those which it seems to delight in.

## FEMALE MOB.

Against all mobs we have always been a stout enemy. There is not an evil that can come upon society so great as a general disregard and violation of its laws. The idea of a mob to *correct or to prevent evil* is an absurdity which would be exquisitely comical if it were not so terrible. It is like harboring *Devils* to restrain the mischief of petty *imps*. These are our opinions still, of all masculine mobs. But we don't know what to make of a genuine female mob. After reading

the subjoined incident our feet had well nigh slipped. We found something resembling a hurra coming out of our mouths, and in trying to get back into our settled principles, we found ourselves very much like a boy trying to climb an icy hill — first up and then down, and slipping all the time. But we resist; — we don't give up our orthodoxy; we will not believe in mobs, even such a virtuous one as this:

*Female Heroism.*—On Friday morning the 10th of July, between the hours of one and two, about forty ladies of the village of Utica, Michigan, secretly assembled, proceeded to a bowling alley, armed with axes, hatchets, hammers, &c., and completely demolished it. They had viewed this insidious foe to their domestic peace for some time, with an anxious and jealous eye; having waited in vain for some legal proceeding against it, they determined for once to take the law in their own hands. They went at it with much spirit and energy — hacked the bed of the alley — tore down the walls — razed the roof to the ground, and finished with trampling upon and breaking to pieces the roof The building was eighty feet long, and this work of destruction was accomplished in little less than an hour!

But we should like to have seen the boys while this was going on! Was there ever a set, probably, looking so sheepish?

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Ohio Grape.—Mr. Affleck, of the New Orleans Commercial Times, Thinks that Longworth's Ohio grape is identical with a native southern variety:

"We find that Mr. L's excellent *Ohio grape*, about which he has so long been in the dark, is identical with the *Jack grape* of the Natchez country, brought here by some early settler from the Gulf coast. We have the Ohio or Cigar Box, from Mr. L's own garden (sent us by Mr. Heath where also we have eaten the fruit) growing side by side with the Jack grape — and they are *identical*."

## COMMUNICATIONS.

### FALL SEASONS IN WAYNE COUNTY, IA.

I have already reported the character of our winters, springs, and summers, and some associated events of each season; and I shall now close the year with a similar sketch of our autumns.

1833.

10th mo. Snow fell about the middle of the month, and again on the 28th. Corn was gathered on the 24th; a day marked as the beginning of Indian Summer.

11th mo., 25th. Two snows this month; the one to-day twelve inches deep! There were two snows also in this month in 1832.

1834.

9th mo., 10th, 13th, and 14th, frost. Sowed wheat and rye. 19th, snow.

1835.

9th mo., 23d., Ground white with frost. 29th, ice. 10th mo., 1st, 2d, and 3d, destructive frosts. 8th, sowed wheat. 10th to 17th, Indian summer. 11th mo., 4th, Indian summer. 11th, strong wind from the west; four or five snows. On the 19th, bees abroad as in spring; and on the 29th, the river at Richmond frozen over.

1836.

In the early fall our roads are almost invariably good; but the 9th mo. of this year affords a remarkable exception: the fore part of the month presented very dusty roads, and the latter part of it, the muddiest within the recollection of our citizens. 10th mo., 4th, snow. 19th, incessant rain, day and night. 11th mo., a week or two of delightful weather; some beech and dogwood still green.

1837.

Noon temperature of 9th mo. 73°; hotest noon 90°, coolest 66°. 15th, sowing wheat. 22d, frost. Much of 11th mo. pleasant, and even warm; bees abroad; roads very muddy. On the 14th there was a splendid aurora, spreading over nearly all the sky.

1838.

9th mo., first three days, frost. Two mornings at sunrise 51° and 58° respectively. The roads throughout the month were exceedingly dusty. Highest noon temp. 86°, lowest 54°. In the 10th mo. the water in my well was but three inches deep; which is lower than it has ever been. Ice on the 13th; snow on the 28th and 29th. The 11th month began with Indian summer. Three snows. Average temp. 46° at noon; highest 64°; lowest noon heat 30. Sowed wheat on the 5th.

1839.

9th mo. A grand auroral display on the night of the 3d; frost on the 13th and 14th; and a heavy one on the 28th. Pigeons (Columba migratoria) flying over the country, this month. 69°, 82°, 55°. 24th sowed wheat. 10th mo., 17th to 28th, Indian summer. Air quite smoky. Locust tree leaves and leaves of the forest, shed. Ice on the 30th. 71°, 82°, 54° the average, highest and lowest noon temp. Only five-eighths of an inch of rain this month! 11 mo., two inches and a half of rain. Average noon temp. 42°, highest 58°, lowest 4°: the mercury stood at 2° below zero in the morning! The whole fall was an exceedingly dry one; water in many wells, exhausted.

1840.

9th mo., ice on the 12th. Frost 17th and 18th. Rain 3¼ inches. Average noon heat 67°, highest 86°, lowest 56°. 10th mo., 25th, snow. Latter part of the month, at 6, 7, and 8 o'clock in the morning, thermometer stood at 24°, 26°, &c., to 44°. Three-fourths of the month, fields green. Peaches gone. Rain 5¼ inches nearly. Average temp 59°, highest 75°, lowest 31°. On the morning of the 25th, at 8 o'clock, the mercury stood at 24°; and I found that the apples left on the trees last night, are frozen; while those that I had picked and left under one of the trees in an open-headed barrel, which was full, and those which remained in the basket, and those shaken off and left on the ground, *were not frozen*. The orchard was in grass, which prevented the ground from freezing where the apples lay: The naked ground was frozen very hard. Have our farmers availed themselves of such opportunities of saving their

apples. The simple and very practicable act of shaking the fruit to the grassy surface beneath the trees, just before such a threatened frost, will save the burthen of a whole orchard. Apples, peaches, and fruit generally, ripened about two weeks earlier than usual. The leaves of the red mulberry, sugar-tree, dogwood, walnut and tulip-tree, fallen. In 11th mo., there was but an inch and two-thirds of rain. Thermometer on the 20th at 5 o'clock A. M. at 14°; on previous days, at 7 and 8 o'clock A. M. from 16° to 28°. Average temp. 45°, highest 65°, lowest 23°. Seven snows, all small. Hail on the 20th.

1841.

The hotest noon-day of 9th mo. was 85°, the coolest 55°; the average noon heat was 70°. At 6 to 8 o'clock A. M. the mercury was at 40° to 56°. Rain 3¼ inches. 10th mo., heavy frost on the 4th. General fall of forest leaves on the 10th. On the 23d, a slight fall of snow: this soon extended to Lake Michigan, where it was three feet deep. Ice on the 24th; mercury at 30 deg. at 7 o'clock A. M. A little troop of snow-birds (Fringilla hiemalis) seen this morning: they disappeared as soon as the snow melted. 27th, Indian summer. Rain this month 2½ inches. Average meridian heat 57 deg., highest 73 deg., lowest 33 deg. The mast of hickory, walnuts, acorns, &c. abundant this season. 11th mo. averaged 46 deg. at noon; the highest noon heat 64 deg., lowest 28 deg. Nearly three inches of rain fell during the month.

1842.

9th mo. The first cornstalk sugar was manufactured here, this year. Ice on the 23d. Average noon temp. 72½ deg., highest 86 deg., lowest 54 deg. Rain 2 1-5 inches. 10th mo., av. noon heat 62¼ deg., highest 74 deg., lowest 48 deg. Peach, pear, and snow-ball in bloom again this month. 11 mo., on the 27th at 7 o'clock mercury at zero, at 4 deg. on the previous morning. Average noon temp. 38 deg., highest 72 deg, lowest 14 deg. Rain 2¼ in. Corn 10 to 12 cts.; wheat 33 to 37, oats 8 to 10; hay scarce at 20 to 25; flax-seed 40 cents a bushel; beef 1 to 2½ cents a pound by the quarter; salt 62½ cents for 50 lbs.; pork $1,12 to $1,50. Ten small snows.

1843.

The average noon heat of 9th mo. was 72½ deg. highest 86 deg., lowest 54 deg. The first lard oil made in Richmond this season: 50 bbls. exported: oil sold here at 75 cents a gallon. Sweet potatoes varied in price from 37 to 100 cents a bushel. Irish potatoes 25; apples 25. Rain 6 + in. On the 6th there appeared the most beautiful, distinct and elevated rainbow I think I ever beheld: the highest part of the arch was about 41 deg; the colors beautifully defined; the arch complete to the very horizon: and a faint reflection of another bow appeared; remained 8 minutes after I first saw it. 10th mo., average heat at noon 50 deg., highest 59 deg., lowest 36 deg. Rain only 1 in; First snow this fall on the 26th. 11th mo., corn, oats, and potatoes, 15 to 20 cents; butter 8 cents. hay 4 dollars; wood 1,25 to 1, 50; sheep 88 to $1,00; pork $2,00; clover-seed $3,50 a bushel; timothy-seed $1,25; flax-seed 69 cents; herd-grass (Agrostis) seed 75 cents. (These price-currents are introduced, not only for comparison with those of other times; but to show the fruitfulness of the fields, &c.) Rain 4½ inches. Average temp. at noon 41 deg., highest 59 deg., lowest 33 deg. Small hail on the 14th. The whole fall was an uncommonly cloudy one.

1844.

The average noon temp. of 9th mo. was 72 deg., highest 85 deg., lowest 44 deg. Frost, which remained in the shade till 8 o'clock A. M. on the 22d. 58 deg. at 8 o'clock A. M. on the 21st. 24th to 30th, hops gathered, corn ripe, and much of it gathered. Fore part of the month the larves of the apple-moth caused much fruit to fall. Loads of peaches in town. Forest leaves beginning to fall. Rain 1 inch. 11th mo., 16th, woods generally have assumed their autumnal hues. 22d, Indian summer. 25th, sudden foggyness with smoke. Ice on the 19th, snow on the 27th and 28th. 20th, Mercury at 26 deg. at 6 o'clock A. M. Noon temp. 56 deg., 72 deg., 36 deg. Rain 2½ inches. 11th mo., average noon heat 50 deg. highest 70 deg., lowest 28 deg. Rain 2 inches.

1845.

9th mo., 3d. My "upland rice" just developing its spikes. Dog-fennel rare. 9th, acorns and wild grapes (Vitis vulpina &c.) abundant. Sowing wheat. 22d. This morning the leaves encrusted with ice. 24th, late frosts nipped the extremety of tomato and pumpkin vines. Melons of all kinds abundant this season. Timothy-seed 125 cents. [I hope the reader will not become giddy-headed, in being tost so abruptly from topic to topic.] Rain 4 2-3 inches. Average meridian temp. 71 deg.+, highest 82 deg., lowest 57 deg. 10th mo. Av. noon temp. 60 deg.+, highest 70 deg., lowest 45 deg. Numerous and perfect *peach blossoms* on my trees (in the country) throughout this month. 5th, locust leaves falling fast. 31st, woods universally brown. Very little dust this year. Rain 3 inches. Wheat 50 to 77 cents; (foreign demand;) corn 20, oats 15 to 20, potatoes 20 to 25; lard 10; butter 10 to 12, rye 37 cents. I closely observed the defoliation of our forests this season, and found the leaves of the following trees to fall in this month, in the order in which the names succeed one another. (The buckeye shed its leaves last month.) Walnut, hackberry, (Celtis occidentalis) sugar, elms, Linden (Tilia pubescens,) sycamore, tulip tree, mulberry, honey locust, (Gleditschia triacanthos), gum, (Nyssa villosa.) Ailanthus leafless on the 20th. Cherry, apple, quince, peach, pear, and lombardy poplar leaves fallen by the 31st. 11th mo., average noon heat 46 deg., highest 66 deg., lowest 18 deg. First snow this season on the 4th—melting as it fell. 16th, ground very dry. 18th, snow-ball leaves shed. Among trees and shrubs I see nothing green but weeping-willows and privet, (Ligustrum vulgare.) 23d, 22 deg at 9 o'clock A. M. An inch and a quarter of snow on the 27th, which had not melted by the 9th of the succeeding month. 28th, 4 deg. at 6 o'clock A. M. Rain (including always melted snow, &c.) ¾ in. 26th, privet leaves embrowned. Our fall winds, like the great majority of our winds throughout the year, are from the west; and the considerable ones vary from one to three a month. J. T. P.

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He that rewards the deserving, makes himself one of the number.

### WAYNE, RANDOLPH, AND JAY COUNTIES.

Passing from Wayne into Randolph and Jay counties the traveller cannot fail to remark the difference in the improvements of the two districts. The extended clearings, bounded and divided by numerous fences; the old and variously intersecting roads; the permanent buildings; and the orchards; together with the clean woodlands in Wayne, are succeeded in the other counties by massy forests tangled beneath with underwood, and enlivened but seldom with openings, made by the hand of nature or of civilization. But Wayne was organized as a county in 1810; Randolph not till 1818; and Jay, I believe, not till 1836. Twenty-six years will give a different appearance to these counties.

Riding in nearly a direct line from Richmond through Randolph to Camden in Jay county, about two weeks before the late wheat harvest, I observed that the grain looked remarkably well; and was informed that very little in the county was either "fallen" or affected by rust or insects. The spring crops, corn and oats, contrasted strongly with those in Wayne: in those counties corn was but a few inches out of the ground, and some oats just peering above the earth; while in Wayne, corn was knee-high, and oats proportionably forward. That county being comparatively level and shaded by forests, the soil remains wet to a late period in spring and forbids early cultivation; and whether it is this consideration or not that has influenced the settlers, I do not know; but I saw more rye in those two counties, than I ever saw in Wayne: one field near Camden contained nine akers: all that I saw along the road appeared thrifty.

After leaving Winchester, the county seat of Randolph, the country is so meagerly watered on the route named, that beside the Mississineway, at Wards, there is scarcely a stream where a horse can quench his thirst. Water, however, is easily obtained by digging twelve to thirty feet, and is of good quality; except one well at Mount Pleasant, in which the water is offensively sulphurous. Joab Ward, is a fair specimen of an "old settler;" and his location is as well known to travellers thitherward, as Washington is to Congressmen. He was a member of the first grand-jury of Randolph county, and has a budget of anecdotes to tell of "early times."

From what has been said, a just inference may be drawn, that water-power, which abounds in Wayne county, is a rare agency in Randolph and Jay. At the crossing of the Mississineway (which, in very rainy seasons is boatable from Ward's, there is a small grist-mill; and at Camden on the Salamony (an Indian name, signifying willow-river, but which on some maps is printed Salamoniac,) there is another. From both these counties, grain is not untrequently brought to Richmond to be ground. A steam flouring-mill was erected a few years since at Camden; but it proved worse than unprofitable.

The absence of limestone (and no other rocks, and but very few boulders even, are found,) is another great privation of those counties. But against the soil no reasonable objection can be made; all the crops speak favorably of it. The most conspicuous flowers that I observed on this road, were the wild rose (Rósa parviflora;) the beautiful penstemon, (Pénstemon pubéscens;) two or three species of haws (Viburnum,) elders, which were common, all along the road; here and there a stalk of flea-bane, (Erigeron;) and a few other blooms, not now distinctly recollected; except the Monarda fistulosa, or wild bergamot, covering large areas in Jay county. I remember but two nurseries in Randolph and Jay counties; one at Ward's, and the other at Camden; the latter an extensive and multifarious one, and well tilled, owned by Hiram Gregg.

No particular timber characterizes these counties: I observed oak, hickory, basswood, ash, walnut, sycamore, beech, sugar, &c., intermixed, Poplar (Liriodendron,) is very rare; for lumber, ash, walnut, and oak, are substituted.

The natural pasturage of the wild woods in these counties is sufficient to induce some persons to drive young cattle from Wayne county to graze it until fall; when they are collected, driven home and sold. A barrel of salt is generally taken out with the cattle, and delivered to some resident, who salts the animals at a convenient place at proper intervals; and it is by this means the herd is kept together. It is not always, however, that the whole drove is recovered by this means, or any other.

Corrections.—In remarking that I had obtained peas this season "perfectly free from insect depredation," I perceive that the editor misapprehends me to say, I had obtained "bug-*proof* peas." I suspect such peas are hardly possible. I merely wished to convey the idea that by destroying the grubs within even a limited area, the pea-weevil would ultimately be so diminished as rarely to molest the pod: such a result *seems* to have followed the practice in my garden.

My friend once intimated that he could make something out of almost any penmanship, even if the writing was done with a plow; but even without the aid of a plow or a pitchfork, my scrawl appears to have nonplused him. On p. 209 of the present volume, he makes me say, certain questions "do not appear to be *answerable* at any time." I certainly did not intend to say so; for, as will be seen by referring to the page, I proceeded forthwith to attempt an answer. I suppose I wrote, that the questions though overlooked in the regular succession of subjects, were not *unseasonable* at any time. The difference, however, is not quite equal to that of the medical directions to rub on some liniment externally, but by the accidental removal of the letter x, the patient was instructed to rub it on *eternally:* or to that, roguishly made by young Franklin, in the primmer lesson; "at the last trump, in the twinkling of an eye, we shall all be changed:" he slipped out the c from the word changed; and struck off the primer for the perusal of the little boys.

For "unlocking of many *systems*" please to read, "unlocking of many *mysteries*."

J. T. P.

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### THE HORSE, AND SOME OTHER THINGS.

Mack's Hill, near Reading, Ohio,
July 21, 1846.

I will state a few things which I have learned, and they may be of benefit to some of your readers. A horse that is driven on hard roads is liable to get stiff in his joints. In 1833 I had an animal,

after driving three or four days, to get quite lame. An old Baltimore teamster told me to wash the mare's legs with a tolerable strong salt brine, which was done accordingly three times aday for at least a week, and once a day the balance of the journey. The stiffness disappeared in a few days, and I drove the mare 1400 miles afterward, and there was no more trouble on that account. What pleased me most was, the mare had a very poor foot to hold a shoe, when I started. It was very brittle and hard; it would break out when a nail was drove in, but it grew tougher at every succeeding shoeing. A smith in New England remarked to me that her foot had a singular appearance; when he pared it it was soft and tough. I account for it in this way: Salt will attract moisture from the atmosphere, which keeps the foot moist all the time; and salt has nearly the same effect that grease has on the foot or a piece of timber. The drippings from salt on a floor, if continued long, cannot be got off; the wood becomes moist and tough; and so with a horse's foot. After washing the legs turn up the horse's foot; clean the bottom; pour the hollow full of brine; hold for a few minutes to soak the bottom. The plan of rasping the foot all over to toughen it, is abominable.

In answer to Mr. Allen, of Spiceland, I would say, that cocoons are commonly sold by the bushel at from $3,00 to $4,00 per bushel. If they were sold by the pound, there would be quite a difference in the price of a bushel at the same price per pound. A bushel of green cocoons (that is when they are first gathered) will weigh from ten to fourteen pounds, according to the variety, and two pounds fourteen ounces to four pounds three ounces when dry. A bushel of orange cocoons will weigh three pounds ten ounces when perfectly dry; a bushel of mammoth sulphur, two pounds fourteen ounces; a bushel of pea-nut, four pound three ounces. Mr. Allen can now make his calculation according to the state he would sell them in. In regard to the growing of silk, I refer him to a communication of mine in the current volume of the Farmer and Gardener.

In regard to the cultivation of the multicaulis. In the first place, get the trees or cuttings as soon as the leaves fall in the fall of the year; bury them in earth raised above the surface of the ground. They should be kept from touching as much as possible. Leave the last layer six inches deep; then cover the whole with boards. When they are taken up in the fall the buds all remain perfect. In the spring following prepare the ground in good order; furrow it four feet wide; lay the trees in the furrow and cover with the plow. Otherwise cut the trees up, twelve to eighteen inches long, stretch a line and stick the cuttings in one foot apart in the row. If this is done early in the season, they will grow. I frequently cut limbs to mark the rows in my peach nursery, and they commonly grow and are a bother to me. Trees from cuttings stuck in the ground will live longer than from layers or whole trees; each has its own root.

JOSEPH MCHANNON.

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### "OHIO EVER-BEARING RASPBERRY."

Under this name, the *Rubus occidentalis* has acquired a reputation, which, perhaps, it never could have gained as the common "black raspberry," or as, by some named, "thimble berry." Indeed, one is compelled to believe, that either ignorance or policy has kept the real character of this plant out of view. One says he can find no botanical description of it anywhere; another is "confident it is not known out of this neighborhood;" nurserymen sell it at twice the price of some of the Antwerps, both in the west and the east; and men reject the plant at their doors, and bring home another of the same kind from 100 miles off, as a rare acquisition. Does the reader suppose that this raspberry will, now that the secret is out, cease to be an "Ohio" raspberry, to be "ever-bearing" as ever, and as black and sweet as usual? If he does, he may be assured that just so far as its qualities deteriorate by the disclosure, they were fictitious.

As the plant was long known in other States before it was "discovered" in Ohio, it is not exclusively, and hence not appropriately *the* "Ohio" raspberry; as it does not bear during three-fourths of the year, it is not properly an "*ever*bearing raspberry." But it is certainly a "raspberry" a long and *late*-bearing one, well deserving cultivation; and I hope those who have the *imported* fruit will enjoy it as much as ever.

### DUSTY HAY.

The Maine Farmer asks, (see p. 223 of the present vol. of the Farmer and Gardener) what causes dusty hay; and cites the opinion of the Massachusetts Plowman, of a writer in it, and of some others. This subject arrested my attention years ago, in consequence of finding hay, which was put into my stable without any annoyance from dust, becoming exceedingly dusty afterward. I did not attribute this condition of the hay to a "tight barn;" for mine was neither "shingled" nor "clapboarded;" and the windows were always open. But from the fact that the hay was not dusty when placed in the loft; but became so in the mow, I inferred that the hay, like books, clothes, furniture, and every animal and vegetable substance, however dry when put away, had contracted *mold*.* On examining my hay, I was confirmed in this conclusion; and have remained satisfied with it ever since. Mold is a vegetable, consisting in this case of a stipe or stem, bearing on its summit a little globular box of minute seed which, when ripe, escapes by the slightest jar, in the form of dust, like that of the puff-ball; and in both cases it is sometimes called "smoke." Any farmer who has good eyes or a suitable glass, can determine the truthfulness of this opinion for himself by a careful examination of his dusty hay.

J. T. P.

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### VINEGAR.

*Messrs. Editors:*—The following letter will explain itself. Mr. Anderson, I know, has had much experience on the subject. I will add that I have found that saddler-tacks are the best to drive in the holes of the bugs. J. MCHANNON.

LEBANON, Ohio, July 29, 1843.

*Mr. Jos. McHannon.*

DEAR SIR:—I received a letter from you yesterday, dated 20th inst., enquiring of me how to preserve vinegar barrels from the bugs and to

*Webster's orthography.

keep it from leaking out of the barrels, &c. This I will not tell you now: the reason is, I don't know myself; but experience has taught me some useful lessons at great expense, which I will send to you, to wit: The bugs will bore barrels where vinegar will make quickest; (that is in a warm place.) They are the hardest on barrels filled early in the season and left out of the cellar. Barrels which have had whiskey in are of no account atall; or if they are made out of timber that has been cut in bark time. Barrels that are good for anything to make vinegar in, should be made of timber cut in February or sometime when the timber is hard and firm. It must be well seasoned. My staves are an eighth of an inch thicker than common; well jointed; are bound with hoops made of small, smoothe hickory poles. Take them from the shop and fill them before they have been used for anything else. I would not give a cent for (new) whiskey barrels after they have been used as such once. I bought a parcel one season and filled them with cider, which they held very well. In the fall and winter I rolled just one hundred barrels into a log house, and when it soured I had but little over fifty. I sold some off and gave some away—all but a few of the best, and these are of no account. I have since bought new ones out of the shop: some of them are good and some are not. Anything will hold cider, but vinegar is a hard thing to keep. It will run right through the pine head of a molases barrel, or one that has not been well jointed and much flagged. There are many bug holes that do not leak till the vinegar eats the dust out of them, and then you think the bugs are boring them, when there is none about. I have seldom ever seen them at work, but my barrels spring aleak, some of them every day. All you can do for yours is, to take some hard wood made small, and sharpen it and fill the holes that leak; it is soon done. Take off the hoops and plug the holes under them; don't take off too many at a time, and next time get better barrels. I examine mine every week. If I find one leaking, take it out, find out the leak, stop it, and put it back again. I have the best of barrels to lose considerable after all the care I can take to prevent it. I keep my vinegar in cellars in cold weather, and in houses when it is warm. Sometimes rack it in the fall, sometimes in the spring. It will sour as well racked clear and clean of pumice as any other way.

JOHN ANDERSON.

P. S. White-oak hoops are good for nothing. They are too soft to keep a barrel tight and firm, and the worms will eat them up the first year.

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### PSORALEA ESCULENTA.

This is the botanical name of a plant growing wild on the elevated plains of the Missouri, and other localities of the far west. Travellers inform us that the Kansas and other Indians use the root as a common article of diet. The Canadian boatmen who ply our remote western waters, call it "Pomme de prairie" (Prairie-apple.) It is also known as "Prairie-potato," and as "Bread-root." Nuttal, who brought this plant into scientific notice as early as 1813, cescribes the root as simple, somewhat fusiform (tapering like a radish, beet, or parsnep,) and bulbous above the middle; with a taste rather insipid, but not disagreeable either raw or boiled: the latter is its common mode of preparation among the savages: its texture is laminated, always tenaceous, solid and never farinacious; it is also somewhat medicinal and operates as a diuretic."

I have introduced this brief notice of the prairie-potato, for the purpose of asking whether its qualities and size could not be improved by cultivation as readily as those of the common potato are acknowledged to have been. Those disposed to attempt this ameliorating process, could probably obtain some roots not far from St. Louis.

J. T. P.

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## SELECTIONS.

### HYBRIDIZING.

Among the many contrivances by which man has succeeded in converting the wild productions of untamed nature into bodies better adapted to his artificial wants, nothing has produced more past advantage or promises more future profit than *hybridizing*. We shall not refer in this place to what has been done in the animal kingdom, but confine the attention of the reader to its effects on vegetation.

The practice is regarded as one of very recent date; and so it is, as an artificial process, applied by rule to definite purposes. But he must be a bold man who dares assign to it historical limits; on the contrary, it may be supposed to date from the creation—or rather, it is in a manner certain that it does. The presence of winds or insects must necessarily from the beginning have produced effects upon plants which resulted in hybrid productions.

Hybridizing is effected by applying the stigma of one plant to the pollen of some other; the end of which is the generation of a form participating more or less in the attributes of both its parents. Nature, in her wildest state, opposes no insurmountable difficulties in the way of this operation. Insects, bepowdered with the pollen of one plant, plunge into the recesses of another, and thus effectually destroy the purity of races. The natural brush on the body of a bee will convey the subtle powder as well as the trim camel's-hair pencil of the artificial operator.

It is contended, indeed, that this cannot be; because if it were so, all species must, in the lapse of ages, be confounded in one inextricable chaos. But, in the first place, this supposition is of little force, till it is shown that that which is easily done artificially cannot possibly take place naturally; and secondly, it must be proved that the wild races of plants actually do remain in all their original purity. No botanist would, we suspect, venture upon such an argument as that. The genera Salix, Rubus, Rosa, and Carex, would make the stoutest advocate of original purity pause before he threw himself into the lists. Nobody, in fact, can possibly doubt that wild hybrids exist, are common, and perhaps much more frequent than we think for. We will not stop to quote notorious and proved instances of this, because we regard the fact as being beyond all dispute.

Let us not, however, infer from this that no natural obstacles are opposed to the indiscriminate mixture of races in plants; on the contrary, there are barriers which cannot be overleaped. By some mysterious agency, there is a complete bar to all

intermixture of plants not closely related to each other. An elm may certainly mix with an elm, and perhaps with a nettle-tree; but not with an oak. A peach may, peradventure, cross a plum, but not an apple. These obstacles are, doubtless, connected with the colecular constitution of plants, the precise nature of which we have no means of examining. Another obstacle consists in the obvious fact that the pollen of a flower has a better opportunity of falling upon the stigma that belongs to it, than pollen brought from any distance; and we know that if pollen has once taken effect, no after-application of other pollen can change the result. In fact, the natural hybridizing of wild plants will generally take place when, owing to some accidental cause, the proper stamens of the flower prove defective.

But there is a still more effectual obstacle to the confusion of races by natural hybridizing. Altho' we conceive that the *production* of hybrid plants naturally is of more common occurrence than may be supposed, it must be remembered that the *preservation* of them is quite an artificial procees. A hybrid tree springs up; it has no means of multiplying itself, except by seed. That seed has no stable constitution, but has a tendency to return towards the condition of one of its parents; in this way the hybrid disappears, while the parents remain; or it may be, and often is, barren; and then it remains as a solitary, childless individual.—Again, a hybrid herb appears; it is exposed to the same obstacles as the tree, in the way of perpetuation: it is barren; its seeds of themselves tend towards the original stock, which is recovered in a generation or two; or they are at once fertilized by the pollen of one of the hybrid parents, when the tendency to a return to its original stock is increased tenfold in strength. It is not, therefore, likely that natural hybrids will often be long perpetuated, although they may be frequently produced.

We mention these things by way of vindicating the hybridizers, who have been accused of attempting to subvert the whole order of nature by monstrous practices. It is clear that they only imitate the practices of nature. It is equally clear, too, that the occasional formation of natural hybrids is intended as a manifestation to man of one of the sources of power with which he is so largely provided. His reason is to be called upon to turn to profitable account that which, in savage nature, leads to no result.

Hitherto the operation of hybridizing has been mainly confined to hybridizing has been mainly confined to gardens. But see what advantages have come of it there. What were our roses in 1789, when the first China rose reached England? and what are they now? The China rose hybridizes so freely with almost every other, that there is hardly an ancient species to which it has not lent some part of its rich foliage, gay colors, and abundant blooming. Can anything be more striking than the effect of hybridizing upon Pelargoniums, Heaths, Gloxinias, Verbenas, and Gladioli? By this process we have given to the hardy pears of the north all the richness and delicacy of those of the south; to watery grapes the perfume of the Muscat; to the pale-faced but hardy Rhododendrons of the Caucasus and America, the rich and glowing colors of their tender brethren of India; to the gaudy Azalea of Pontus, the crimson of the small-flowered fragrant species of the United States.

Such striking consequences of the very first operations in hybridizing, have excited an universal desire to vary and extend them. Everybody now, who cares for his garden, asks himself in the first place what he can do to get new seedlings; and to hybridizing he looks exclusively for assistance.

Hybridizing is a game of chance played between man and plants. It is in some respects a matter of hazard. What increases the charm of the game is, that although the end of it may be doubtful, yet a good player can judge of the issue with tolerable confidence, and that skill and judgment have in this case all their customary value.

Though hybridizing has already led to important results, they are probably nothing compared with what may be expected to come of it. We anticipate through its assistance a change in the whole face of cultivated plants, and we shall be much surprised if even a few years do not bring us acquainted with races of trees, esculents, corn, and forage plants, of at least as much importance in their way as those which have already appeared among fruits and flowers: all that is wanted is to call attention to the subject, and to point out what the principles are which the experimenter has to bear in mind.

The effect is produced by applying the pollen of one flower to the stigma of another. The pollen indicates the male parent, the stigma the female. In performing the operation, it is necessary to use these precautions: — The female flower must be deprived of her stamens before they burst and disperse their pollen; and as soon as the stigma is glutenous enough to hold it fast, the pollen must be applied with care. Should this care not be taken, the stigma is very likely to be inoculated with the pollen of her own or some other flower, and then the pollen which it is intended to use will not take, for it will always be borne in mind that a stigma once inoculated cannot be inoculated again. From want of these precautions, people are continually fancying they have obtained hybrids, when they have only gained natural seedlings. At least half the specimens of so-called hybrids sent to us for examination, are not hybridised at all. When the Dean of Manchester, who is the greatest of all authorities in this matter, wishes to obtain a cross, he always endeavors to force the female parent before others of its kind blow, so as to be insured against accidental inoculation from pollen floating in the air. Want of attention in these minutiæ has led to some singular errors on the part of a very ingenious correspondent, who fancied he had obtained hybrids between between Crinum, Ismene, Buphane, Calosiemma, &c., while he had only raised the usual seedlings.

It is hard to say within what limits the operation may be successfully practiced. The general rule is, that plants only which are very nearly related, are able to inoculate each other. But there may be exceptions to this. At least we know that very near connexions have, or seem to have, a great aversion for one another. For example, a raspberry and a strawberry are first cousins, yet they appear to have no mind for an alliance. A gooseberry, currant, and black currant, are still nearer to each other, and their repugnance seems

invincible; at least nobody has yet found means to hybridize them with each other, though many have attempted it. On the other hand, Heaths, different as they are from each other, intermingle freely; Cereus speciosissimus is readily enoculated with the night-flowering Cereus; and even the creeping Cereus has been crossed with the former; the Rhododendron will fertilize the Azalea; and, strangest of all, the Red Cedar has on several occasions been found to inoculate the American Arbor Vitæ, the issue from which is that curious whipcord-branched plant, called in the gardens Thuja filiformis. This singular shrub was so produced for the first time in Messrs. Loddiges' nursery at Hackney, and has since been obtained in the same manner at Paris. These facts open a very wide field for inquiry, and are especially valuable as affording evidence that the limits of hybridizing are far from being narrow.

In the midst of many experiments conducted without exactness, from which no safe conclusion can be drawn, there are some which, in the hands of such men as the Dean of Manchester, seem to justify the important inference that, as a general rule, the properties of the male parent will be the most conspicuous in the hybrid. For example, Mr. Herbert crossed the long yellow-cupped common Daffodil, with the small red-edge-cupped Poet's Daffodil; and the seeds of the common Daffodil furnished a bulb with most of the attributes of the Poet's Narcissus. The same gentleman obtained also out of a capsule of Rhododendron ponticum, inoculated by Azalea pontica, seedlings which had entirely the habit of the latter or male parent. When the common scarlet Azalea, with its crimson flowers and narrow leaves, was inoculated by Azalea pontica, Mr. Gower found that its seeds produced plants much more like the male than the female parent. Exceptions, or apparent exceptions to this, do no doubt exist, and hybrids could be found which are either half way between their father and mother, or more like the mother than the father; but as far as any means of judging at present exist, these would seem to be the exception and not the rule; and therefore the greater influence of the male may be taken as a tolerably safe guide in all experiments upon this interesting art.—*Lon. Gard. Chron.*

## FARMING AND SCIENCE.

In Dr. Johnson's admirable little story of "Rasselas," Imlac makes a long digression in order to recount to the prince all the various things which a man ought to know who aspires to the name of a poet. Before he has half done, the prince interrupts him with the exclamation, "enough! thou hast persuaded me that no man can be a poet! Proceed with thy narration."

The bare mention of the sciences with which the agriculturist is expected now-a-days to be familiar, reminds one of this passage, and tempts him to exclaim with the impatient Rasselas, "enough! no man can be a farmer. Let's change the subject."

So much for theory; how is it with practice? A tenant dies or leaves his farm, or hints that there is a possibility he may leave it. No matter whether the said farm be large or small, good or bad, sand or clay, within one month, the landlord's residence is in a state of seige, and his table groans under a feast of letters; he is pelted with applications. Now, imagine for a moment all the motley host of applicants for the vacant or vacable farm collected together, and the landlord, after eying the noun of multitude before him, all answering to the name of "farmer"—imagine him, with a painfully suppressed fit of inward laughter, addressing them in the following words: "Now, I will let the farm rent-free to the man among you who shall tell me the meaning of the following words: chemistry, geology, vegetable physiology, botany, mechanics, hydraulics, hydrostatics, geometry, meteorology, anatomy, animal physiology, natural philosophy, oxygen, nitrogen, hydrogen, carbon, ammonia, soda, potash, phosphorus, sulphur, alumina, silica, calcareous, ferruginous, centre of gravity, line of traction, angle of forty-five, percolation, filtration, capillary attraction, solution, precipitation——. There I am out of breath. I have only told you half. You look amazed, and are all laughing; but it is *I who ought to laugh at you;* for every one of you that has made application for this farm, virtually undertakes to solve practically the most difficult and mysterious problems that the human mind can perform; and the man that takes it *will do so*, and every man that holds a farm and cultivates it, *does do so* every year of his life—in every one of the sciences and subjects of which I have merely given you the proper names!"

And such is literally and honestly the fact. The list is long and the names are hard. But we may know a man's character well, and he may have done us a good service many a year, and yet it is perfectly possible that we may be ignorant of his name; and so it is with the sciences and subjects that belong to agriculture. Of all the practical pursuits in which the mind of man can be engaged, it is the one which requires the most extended knowledge of, and derives the most advantage from an acquaintance with what are called the physical sciences, meaning the knowledge of natural causes and effects in the matters of earth, air, water, fire, plant, and animal.

But if it makes this demand upon the capacity of man, with what does it repay him? With the highest, the truest, the best of all earthly blessings—health to the body, satisfaction to the feelings, and occupation to the mind. And to these present boons there is added another, less obvious and tangible, but singularly and beneficently adapted to the imperfection of man's earthly state, viz: an interesting and alluring *anticipation of the future*, which, hiding the gray hair, masking the deepened wrinkle, and soothing the recent woe, gently leads him on from year to year, till the allotted span has already past, the goal imperceptibly won, and the earth, which his mind has studied, and his strength has tilled, receives him in her gentle bosom, and, whilst he sleeps in peace, "the good that he has done lives after him."

"Very pretty, indeed—highly pleasing and poetical," you will say; "but if one may venture an opinion drawn from common remark and daily experience, your farmer is, of all mankind, the most uninformed of all these scientific susceptibilities and dependencies of his art, and the least sensible of all those moral and physical advantages that you flourish about. If the pursuit be really such as you describe, how comes it that in

this same six thousandth and fifty-something year since Adam found the soil, and nineteen or twentieth since Mr. Deanston Smith *discovered the subsoil*, that farming is still lost in the dim background of civilization; a mark for every passer-by to have a shy at? Surely, there must be some mistake! We cannot be talking about the same thing! If agriculture be, as you say, (and as Pliny and Virgil, and Dr. Johnson, and Mr. Pusey, said before you,) the *oldest*, the *noblest*, and the *best* of all human pursuits, surely *agriculture* and *farming* must mean different things, for sure, the *oldest* practice must be the most *perfect*."

The answer is by no means obvious; but strange as it may seem, it will be found, on examination, that the advancement of the arts is exactly in an inverted ratio with their antiquity. The cotton trade is far before the old silk trade, and the silk before the still more ancient wool trade. In a word, the more the human mind is advanced, previous to the discovery and practice of any particular art or trade, the more suddenly does that trade leap into perfection; because *it has no established prejudices to contend with.* Those two inveterate hags, prejudice and (mistaken) self-interest, strangle every babe that is too big for their swaddling clothes, and woe to the *giant* that is born within the rounds of their midwifery! The fair and noble proportions of science appeal in vain against their accursed partiality for the perpetuation of original deformity and dwarfship. And where is the ancient art in which these beldames are not still in the possession of a lingering practice? Is it not become a proverb that the old professors are the fierce opponents of a new discovery? Who imprisoned Galileo? The monkish monopolists of science and knowledge. Who persecuted Caxton? The transcribers of manuscripts. Who denounced Luther? The priests of the old faith. Who jeered at Harvey's discovery of the arterial circulation? The physicians of the day. Who called Lord Stanhope a madman for putting steam engines into a ship? A committee of naval captains. Who ridiculed railroads? The old coach proprietors. Who laughed at the man that first stocked away the useless hedgerows, grubbed up the trees, deep plowed and deep drained the land, and spared no expense in the application of every modern appliance to the farmery? The surrounding farmers.

In a word, then, once again, why do the modern arts beat the old ones? Because they alight upon "a fair field and no favor," where the struggling but tender infancy of human ingenuity and enterprise is not blasted by the chilling breath of established ignorance and baleful prejudice, nor harrassed by the poisoned stings of vulgar ridicule.

*C. W. H., in London Agricultural Gazette.*

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To Day Laborers.—We would earnestly commend to the notice of all poor, hard-laboring, tax-paying journeymen whose wages "docked" thirty-three per cent. if they are absent from their work an hour and a half—we say we would commend to their meditation the following table of statistics of idleness and high pay and living at their expense. Perhaps many single-minded persons are not aware that while they themselves receive no wages while away from labor, the men they support are paid fat salaries while *waiting orders*, as it is called. A captain in the navy gets $3,500 a year for "waiting orders"—or as much as seven ministers of the Gospel while in actual service of their Master. A lieutenant receives $1,200 and his rations, or board, for waiting orders—or as much as four stout blacksmiths receive for working every day (Sundays excepted) in the year. Now we have been looking into the Naval Register for 1845, and we find that the following proportion of naval officers were waiting orders, or on leave of absence:

| | | | | | |
|---|---|---|---|---|---|
| 28 of | 68 | Captains, | receiving | – | $97,500 |
| 56 " | 96 | Commandants | " | – | 100,800 |
| 109 " | 327 | Lieutenants | " | – | 130,000 |
| 18 " | 69 | Surgeons | " | – | 27,000 |
| 5 " | 16 | Passed Ass't do. | " | – | 4,250 |
| 4 " | 41 | Assistant do. | " | – | 4,600 |
| 16 " | 64 | Pursers | " | – | 24,000 |
| 7 " | 23 | Chaplains | " | – | 5,600 |
| 23 " | 169 | Passed Midship'n | " | – | 13,000 |
| 70 " | 314 | Midshipmen | " | – | 21,000 |
| 12 " | 31 | Masters | " | – | 9,000 |
| 2 " | 11 | Masters' Mates | " | – | 600 |
| 2 " | 22 | Prof. Math'tics | " | – | 2,000 |
| 3 " | 30 | Boatswains | " | – | 1,080 |
| 4 " | 40 | Gunners | " | – | 1,440 |
| 4 " | 36 | Carpenters | " | – | 1,440 |
| 6 " | 34 | Sailmakers | " | – | 2,160 |
| 369 | 1381 | waiting ord's and rec'g | | | $444,270 |

There, what do you think of that, you man of the sledge? It takes nearly one million of days' work, to pay the salaries of the officers in the navy, who are waiting orders;—that is, waiting for a job.—*Christian Citizen.*

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## OIL CAKE.

*Some of the Results of the Analysis of Oil-Cake, by the Agricultural Chemical Association in Scotland.*

1. That the per-centage of the protein compounds, in the analysis called gluten and albumen, is nearly equal to what is contained in peas and beans, and that, therefore, for the production of milk for the cheese-dairy, and also for laying on muscle, oil-cakes are as valuable as beans, peas, or clovers. This is a result somewhat unexpected, inasmuch as the value of oil-cakes in the feeding of stock has hitherto been supposed to depend very much upon their power of laying on fat: in other words, upon the per-centage of oil they contain.

2. The proportion of oil in these cakes is greater than is naturally present in any species of grain or pulse usually cultivated. Oats contain as a maximum about seven, and Indian corn about nine per cent. of oil, but these cakes contain twelve per cent., and are, therefore, in their ability to supply fat to an animal, superior to any of our cultivated grains.

3. These oil-cakes leave six per cent. of ash, of which one-third consists of phosphoric acid: 100 lbs. of oil-cake, therefore, contain two pounds of phosphoric acid. On the other hand, our common kinds of corn—wheat, for example—leave only two per cent. of ash, of which one-half consists of phosphoric acid, or 100 pounds of wheat contain one pound of phosphoric acid. *Therefore*, for laying on *bone*, or for supplying the materials of bone to growing stock, *oil-cake is twice as valu-*

*able as wheat*, weight for weight, and *more than twice as valuable as oats or barley* which are covered with a husk.

4. Again the same reasoning shows that, as grains of all kinds draw their phosphoric acid from the soil, these oily seeds will exhaust the soil of its phosphates to a much greater degree than our corn crops: 100 pounds of linseed will carry off twice as much of them from the soil as 100 pounds of wheat.

5. But the same circumstance supplies an additional reason why the manure of *full-grown* store stock fed upon oil-cake is so much richer than that obtained by the use of any other kind of food. It is richer.

(*a*). Because the proportion of the protein compounds (albumen, &c.) in the oil-cake is greater than the fattening animal can appropriate, and thus much of them passes off in a more or less changed state, and is mixed with the dung.

(*b*). The oil also is in larger proportion than can at times be laid on their bodies even by fattening stock, and this unquestionably contributes to the fertilizing quality of the manure.

(*c*). But the full-grown animal appropriates scarcely any of the *phosphates*—the whole of these therefore, which the animal consumes in its food, appears again in its dung. And the oil-cakes being richer in these phosphates weight for weight, than any kind of corn used for food, the dung thus made is also richer in these phosphates than that which is obtained from animals fed upon almost any other kind of food.

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THE WINE-DRINKERS. — It is not generally known that wine *baths* are quite common in France — nevertheless, such is the case. The Duke of Clarence is not the only gentleman who has enjoyed an immersion in malmsey. Punch has tried it with the very best sherry. Only imagine! Punch — the veritable English Punch — swimming in French wine, and kicking, plunging, and laughing, until the tears ran down his cheeks, and never thinking of the expense—a five frank piece!

"What! a five franc piece for a tub full of wine? Hurrah! *Vive la France!*"

"Gently—gently. At least *fifty* others bathed in the same wine—*after* Punch. The keeper of *bagne* had a preference for Punch, and gave Punch the first dip. *After* him came fifty others—making in all *fifty* five-franc pieces. A good price for the tub."

"The wine was then thrown out?"

"Not at all. Not so, by any means."

"What then?"

"Bottled! Bottled, of course."

"Bottled! And for what purpose?"

"Why, for drink, to be sure."

"Drink! Who would drink such stuff?"

"Why, the English do—the Yankees do! The latter import it in large quantities. It is a great favorite in Yankee-land."

Now, dear wine-drinking friends, anti-temperance friends, when you next smack your lips over a glass of champagne or burgundy, reflect that a Lyonese alderman may possibly have bathed in it, and see if the reflection will assist you in appreciating its flavor.

## THE FIRST GRAFTED APPLES IN OHIO,

*Introduced by Israel Putnam, at Marietta, in* 1796.

Washington county has long been celebrated for the quantity and excellence of the apples annually sent from there to New Orleans and other river towns. That region has also supplied the greater portion of southern Ohio, and the river counties of several other States with young apple trees and grafts, for nearly half a century past; so that the kinds of fruit originally introduced, and forming the orchards of that region, have now become disseminated over a large portion of the western and south-western states; and as but few cultivators have been careful to learn or preserve the names, much confusion now exists, and numerous local names have been given to some of these old standard fruits. With a view, therefore, to assisting, in some degree, to settle disputes respecting the names and origin of apples from the old Washington county orchards, we made particular inquiry when visiting in that region, a short time since, to learn the names and early history of these fruits, from the earliest cultivators—a few of whom are yet living. We found that all the old orchards which have gained so much celebrity for the county, were grafted with the same varieties of fruit, with some variation merely as to the proportion of the different sorts; and that all originated from a lot of grafts obtained from Connecticut, in 1796, by Israel Putnam, of Marietta. These grafts, it is believed, were mostly taken from the celebrated old orchard on the estate of his grandfather, Gen. Israel Putnam, (of wolf-killing memory,) at Pomfret, Connecticut.

On their arrival at Marietta, they were put into the hands of William Rufus Putnam, for him to distribute, and graft a nursery of seedling stocks for himself and brother. This pioneer nurseryman is still living, in the enjoyment of sound health, and, has in his possession the original list of these grafts, a copy of which we are happy in being able to subjoin:

*List of Apple Grafts received from Connecticut, in* 1796.

1 Putnam Russet,
2 Seek-no-farther,
3 Early Chandler,
4 Late Chandler,
5 Gilliflower (Red,)
6 Pound Royal,
7 Natural, (Seedling)
8 Rhode Island Greening,
9 Yellow Greening,
10 Golden Pippin,
11 Long Island Pippin,
12 Tallman's Sweeting,
13 Striped Sweeting,
14 Honey Greening,
15 Kent Pippin,
16 Cooper Apple,
17 Striped Gilliflower,
18 Black Gilliflower,
19 Prolific Beauty,
20 Queening,
21 English Pearmain,
22 Green Pippin,
23 Spitzenburg,

From what we could learn of the Messrs. Putnam, Judge Barker, and George Dana, Jr., it appears that about one-third of the above named varieties have been lost, or rejected as unprofitable, so that they are now found in but few, if any, orchards in that region. In relation to the disputed question respecting the identity of the Putnam Russet and the Boston or Roxbury Russet, we found it the general opinion that they are one and the same apple, though considerably changed by soil and climate. At any rate, it is evident from the foregoing facts, that it is an old variety in New England. It is regarded as the best and

most profitable winter apple in the list, and is more cultivated than any other variety, for the southern markets. Some of the other varieties are not known or described by the names here given them, in any of the standard eastern books or catalogues, while the names of several others are applied to apples of entirely different character.—*Ohio Cultivator.*

## PEACH CULTURE IN DELAWARE.

(*Abridged from the Southern Planter.*)

To Mr. Isaac Reeves, a native of New Jersey, is the credit due of first introducing, on a large scale, the culture of the innoculated peach tree into Delaware. The late Mr. Ridgway, of Philadelphia, owning a farm near Delaware City, on the Chesapeake and Delaware canal, was induced by Mr. Reeves to become his partner, and upon this property, in the spring of 1832, they set out the first twenty acres of innoculated peach trees ever planted in this state, with the view of supplying the Philadelphia market. They rapidly extended their plantation to about 120 acres; were eminently successful, and one year—the *very best* season they had—their gross income from the sales of fruit was some sixteen thousand dollars. Peaches then commanded from one dollar twenty-five cents to three dollars per basket, containing about three pecks each. In the spring of 1836 the late Mr. Manuel Eyre and myself followed suit upon our "Union Farm," midway between Wilmington and Newcastle, on the Delaware river, to about the extent of one hundred and forty acres. In a year or two afterwards, Mr. Philip Reybold and Sons went into the business; then a host of others, until now, from twenty-five hundred to three thousand acres of land, in Newcastle county, are planted with, and successfully cultivated in, peaches; making Delaware, though the smallest of the states, the largest producer of this fruit. The result has been, a proportionate diminution of price, the average, per basket, one season with another, not exceeding from thirty to sixty cents. In this way delaware has become the principal supplyer of the Baltimore, Philadelphia, N. York, and North River town markets, and many of our fine peaches now reach Boston. The whole annual income from this branch of business to the farmers of this country, may be estimated at from one to two hundred thousand dollars. For so handsome an additional product, the agriculturists of Delaware, as well as the consumers of peaches in our vicinity, owe a debt of gratitude to the *originator* of the culture, which, as one, I should gladly unite in presenting with some valued and lasting memento, in recognition of his merit for giving a *new staple to a state;* for who is a greater benefactor to mankind and the age he lives in, than he who brings into operation a new branch of business, and gives, by his enterprise and perseverance, an impetus to agriculture, causes the earth to give forth its increase, and so multiplies its fruits as to bring them within the reach and enjoyment of all?

The great improvement made in peaches within the last few years, in New Jersey and Delaware, consists in propagating none but the finest kinds, by *budding and grafting*, so as to have the fruit *as early* and *as late* as our latitude will admit of, the earliest ripening with us from the first week in August, such as Troth's Early, Early York, and Early Ann, and ending in the latter part of October, with Ward's Late Free, the Heath, Algiers' Winter, &c. I need not take up your time now with enumerating all the different varieties used and planted out to keep this succession. Some of the principal ones are, (in the order of enumeration,) Troth's Early, Early York, Early Ann, Yellow Rareripe, Red Rarelipe, Malacatoon, Morris' White, Old Mixon, Rodman, Ward's Late Free, Malden, Free Smack, Late Rareripe, Heath, Algiers' Winter, &c. These trees are generally obtained for about six dollars per hundred, from approved nurserymen in Delaware and New Jersey, and the rearing them constitutes a distinct business of itself. They are produced by planting out the peach-stones, or pits, in the spring, which have been slightly covered with earth in the fall, so as to be exposed to the action of the winter's frost. The sooner the pits are put in the sand or earth, after the fruit is matured, the better. They should never become dry. The shoots from these stones are budded in August of the same year, from four to six inches from the ground. The ensuing spring all the first year's growth is cut off above where the scion has taken—not, however, until it is well developed—when, in the fall and following spring, they are ready for transplanting or sale. The mode of preparing the ground for them, is precisely that with us of the Indian corn—the earth is well plowed, and from thirty to forty bushels of lime is spread upon it to the aker. The trees of like kinds (for the convenience of picking) are then set out in rows at distances varying from twenty to thirty feet apart, according to the strength of the soil; a crop of corn is then put in and cultivated in the usual way, and this is done successively for *three years;* by this time the trees begin to bear;—the cultivation of the corn being the proper tillage for the trees, and this crop amply paying for all investment in trees, &c. After the trees commence bearing, no other crop of any kind should ever be grown among them, as I have known two rows of potatoes between a row of peach trees, not only effect the fruit, but seriously injure the trees; but they should be regularly plowed, some three or four times in the season, just as if the corn crop was continued.

So obnoxious, in our country, is the peach tree to the worm, or borer,—"*ageria exitiosa,*"—that each tree in the orchard should be examined twice a year, summer and fall,—say in June and October,—by removing the earth down to the roots, and killing, with a pruning-knife, every intruder; then scraping the injured bark and removing the glue. Thus exposed, they should be left for a few days, when the earth should again be replaced with a hoe. The limbs should be only moderately pruned, or thinned out, so as to admit the sun and air, avoiding, in the operation, leaving *forks*, which inclines them to split when burthened with fruit.

When the peaches ripen, they should be carefully picked from step-ladders, seven to eight feet high, into small hand-baskets, holding one peck each. Our operators for this purpose are both men and women, who earn from fifty to seventy-five cents aday, besides being found. These baskets are gently emptied into the regular market baskets, which are all marked with the owner's

name, and strewed along the whole line of orchard to be picked. As these are filled they are put into spring wagons, holding from thirty to sixty baskets, and taken to the wharf, or landing, where there is a house, shed, or awning, for the purpose of *assorting them*, each kind by itself, which is into prime and cullings—the prime being distinguished, not only by their size and selection, but also by a handful of peach leaves scattered through the top. They are then put aboard the boat in tiers, separated by boards between, to keep them from injury, and so reach their destined market. We consider a water communication from the orchards, or as near as may be, most essential, as all land carriage more or less bruises or destroys the fruit. Our roads through the orchards and to the landings, are all kept plowed and harrowed down smooth and even. The baskets for marketing the peaches, are generally obtained in New Jersey, at from twenty-five to thirty-seven dollars and fifty cents per hundred. With trifling modifications, our culture and practice may be made to suit not only the southern, but the south-wester states.

I may here, perhaps, properly remark, that the average life of our trees is from nine to twelve years, when properly cared for and protected as I have described. That the two great and devastating enemies the trees have to contend against, are the "*peach worm*" and the "*yellows*;" the first readily yielding to the *knife* and semi-annual examinations; the latter being a *constitutional, consumptive*, or *marasmatic disease*, for which no other remedy is as yet known to be practiced, *but extirpation and destruction*. There are *many theories* and *some practice* recorded on this, by far the most destructive enemy of the peach tree. I may hereafter give my own views on this particular and obscure disease. I concur, however, with Mr. Downing, of Newburg, that the great and prevailing disposition of the peach tree, in our climate, is to over-production of the fruit in favorable seasons. Our remedy for this is to carefully thin it off, by plucking all those that touch, or are within two or three inches of each other, when the size of hickory-nuts, which are thrown into some running stream, or into the hog-pens, to be devoured. "His mode, 'heading in,'" or pruning one half of the producing buds, is new to me, but which I have just tried upon my garden trees in the city, and will be able to speak of, *experimentally*, hereafter.

With us in Delaware, as everywhere else, the peach tree *succeeds best in a good soil*. That preferred, is a rich, sandy loam, with clay. Many of my finest trees and choicest fruits are grown in a loose and stony soil. The trees should never be set out in wet, low, or springy situations, and for the same reasons, high and rolling ground should be selected for your plantations, and for the additional circumstance that they are less obnoxious to early frosts.

I may further remark, for the benefit of those desirous to pay some attention to the cultivation of peaches, (*and who should not be?*) that considerable additions of new and valuable varieties, native as well as foreign, are annually being made to those already known among us, many of them very fine. I have now several hundred raised from pits, imported for me by N. Frazier, Esq., Buenos Ayrean Consul, of Philadelphia, and long a resident merchant in that city, many of which will bear this year and next. To Mr. Sayers, of Sparta, Georgia, I am also indebted for a full sample of the native Georgia varieties, as wel as to some other gentlemen in different states; all of which I mean to test and bring into notice, if of sufficient value.

## NOTES ON MAKING CHESHIRE CHEESE.

On a moderate calculation, 12,000 tons of cheese are made in Cheshire annually. The milk, from which chese is made, consists of three parts—cream, whey, and curd, into which, by repose, it spontaneously seperates; but the separation of the whey from the other constituents is accelerated by the addition of a small quantity of a simple acid, which is obtained from cured and dried maw-skins* by macerating them in warm water. This infusion is called steep or rennet.

Cheese-making comprises the complete extraction of the whey, and the proper compacting and curing of the curd. Richness depends upon the cream; and. in Cheshire, cheese is professedly made from full milk, though, in different dairies, a little cream is skimmed off.

Number of cows kept, and produce.—The number of cows usually belonging to a cheese-dairy is seldom less than 8 or 10, or more than 70 or 80. From 18 cows a cheese from 36 to 54 lbs. weight is made daily during four or five months of the summer. The annual produce of cheese varies with the quality of the cows, the mode of keeping them, and the nature of the herbage; and great loss is known to have been sustained by not feeding the annimals sufficiently in winter.

Calving.†—It is customary to arrange so that the cows may calve in March or April; and, as soon as the calves are fed or disposed of, the cheese-making begins, and continues, except in small dairies, nearly to the end of the year.

Milking.—The operation commences about five o'clock in the morning, and five or six o'clock in the evening. It is performed in cow-houses all the year; and it is usual to have a milker to every six or seven cows. The milk of newly calved cows is not mixed with that of other cows till four or five days after calving.

Offices and Utensils.—The evening's milk is seldom made into cheese till the following morning, and, in small dairies, sometimes not till the second morning. A cooll millk-house is necessary; and hence it is commonly found on the side of the farm-house least exposed to the sun. The milk is usually kept in portable, shallow earthenware

* *Receipe for curing maw-skins.*—Procure fresh skins the year before they are wanted; free them from chyle and every impurity; turn them inside out, and salt them; lay them one upon another, with salt between, in a deep earthenware vessel; cover the whole over with salt, and lay a lid on the top. About a month before using them, take them out and drain the brine from them; then spread them on a table, and powder them on each side with fine salt. In this state, they are to be rolled with a paste roller, distended with splints of wood, and hung up to dry.

† *Gestation of cows.*—From observations of the late Earl Spenser on the period of gestation of 764 cows, it appears that the term extends to 284 days.—*Journal of Agriculture.*

vessels; but, in some dairies, zinc† or leaden‡ coolers are used.

Most milk-rooms have lattice or wire-windows for the circulation of air, and an inclination is given to the floors for the free escape of the cold water which is daily applied to them in summer Precautions of this kind are necessary to prevent the milk becoming sour. A temperature of 50° of Fahrenheit is thought the best throughout the year. The dairy is generally near the milk-house, and fitted with two boilers; one for scalding whey, another, less in size, for heating water. The salting and drying house should adjoin the dairy. Here the cheeses are placed on stone or wooden benches, salted externally, and dried gradually before removal to the chese-room. Some dairymaids dispense with external salting. Sometimes the cheese-room is over the dairy; and, at others, it is over the kitchen, or other apartment in which fire is kept. Light and air is always excluded from it by a curtain or shutters; and one reason assigned for the practice, is its tendency to prevent the hurtful effects of the fly. Some of the larger cheese-rooms are warmed by stoves or hot air, and, in rare instances, from ordinary fireplaces built in them. If the cheese-rooms become too warm in summer, the cheeses need to be removed to cooler places.

Process of Cheese-making.—The extraction of the whey and salting occupy from five to seven hours, and it is therefore convenient to commence work in the morning. In this case the evening's milk is kept over night; and, in the morning, the cream is skimmed off, and a portion of the milk warmed. The warming is effected by means of a brass or tin-pan, about 20 inches in diameter, and 8 inches deep, in which the milk is floated in the boiler, the water in which has been heated for the purpose. In the early months of the season, so much as half the evening's milk may be heated to a temperature of 100° of Fahrenheit, a heat seldom if ever exceeded, except with the view of saving trouble in the after-process. The cold milk is now poured into the cheese-tub, and the warm added to it. The temperature of the mixture may be about 65°; but, in warm weather, 70° will be enough. It is, however, becoming the general practice, in summer, not to warm the evening's milk; and, in very warm weather, even the temperature of the morning's milk is sometimes reduced. The cream, diluted in about double its quantity of warm or new milk, is next put in. If a small portion of the cream is to be retained for butter, it is thought better to skim it off the whole surface of the cream before diluting, in order to remove froth and bubbles, which are considered prejudicial to the cheese.—This leads to the conclusion that fixed air in the curd is detrimental; and suggests the inquiry, whether it might not be better to heat the whole of the evening's milk to the required temperature, than to raise the temperature of a part of it to 100°. The next step is to add the new or morning's milk, which is done by passing it through a seive placed on the cheese-ladder over the cheese-tub. Bubbles seen floating on the surface are skimmed off, and passed through the seive to break them.

An important point, now demanding attention, is the proper temperature of the milk when the rennet is to be put in. Little is known among farmers and dairy-maids as to the precise heat which is best; and it is seldom that the temperature is tested otherwise than by the hand. In some dairies in which observations were made, the lowest heat was 77°. Even where what is called cold-cheese, which has a tendency to green mould, is made, it is not supposed that a temperature is adopted, at any season much under 74° or 75°. The evening's milk being about 75°, and the morning's milk from 90° to 95°; the temperature is found to be from 80° to 85°. The exact heat at which milk ought to be coagulated is a matter of essential importance in cheese-making, and it can be only ascertained by a series of careful and judicious experiments, made by scientific and practical parties.

The rennet or steep is now to be added. To fix the quantity requisite for coagulating a given measure of milk is difficult, as maw-skins vary much in quality. In using them, two skins are often cut at once. Three square inches taken from the bottom or strongest part of the one, and one or two inches from the top or weakest part of the other, are generally sufficient for 60 gallons of milk.—These pieces are put into a cup containing about half a pint of luke-warm water, with a tea-spoonful of salt, the day before the infusion is required. The water thus impregnated with the maw-skin is passed through a sieve into the milk; but the skin itself is usually kept out,—the rennet cup is well scalded before being used again. The colouring matter* and rennet having been put in, the milk is well stirred, and left to coagulate; and the tub is covered up. The coagulation is commonly effected in an hour or an hour and a half. The warmer the milk, or stronger the rennet, the sooner coagulation ensues; but the curd is tougher and less in quantity; on the contrary, the cooler the milk, or weaker the rennet, the longer is the curd in forming, but it is both more tender and there is more of it. Too much rennet tends to impart an unpleasant flavour or bitterness to the cheese.

It may generally be expected that the heat of the curd, when formed, will be four or five degrees less than the milk was when the rennet was applied; and the difference, especially in cool weather, should not be greater. To determine when the curd is fit for "breaking," requires some practical knowledge. It is usually done by gently pressing the surface of the milk by the back of the hand, or by lifting up the skimming dish, beneath which the curd and whey will distinctly appear if the coagu-

† *Zinc vessels.*—Such vessels are certain, after a short time, when the milk and pans sour, to hold a considerable portion of zinc and its salts in solution; and it is well known that even a small quantity of zinc will cause violent spasmodic vomitings.—*Journal of Agriculture.*

‡ *Leaden coolers.*—Lead, when exposed to the action of air and moisture, is rapidly corroded . . . forming a white crust of carbonate, which is highly poisonous.—*Gregory's Outlines of Chemistry.*

* *Colouring Matter.*—The substance which ought to be used as colouring matter is Annatto, the produce of *Bixa Orellana* of Linnæus. The article chiefly used, however, is manufactured in this country. It imparts to the cheese an amber or cream-like appearance. It is seldom employed when the cheese is for consumption in the families of the Cheshire farmers; for it is known not only that it does not improve the flavour, but that if the quality is inferior, or, if there is too much of it, there is a hazard of the flavour being much deteriorated. One pound of it to a ton of cheese, or half an ounce to seventy-five pounds, may be considered a moderate proportion.

lation is complete. Another criterion is the colour of the whey, which should be pale green.

The breaking and gathering of the curd next engage attention. These operations are performed by the hands and skimming dish, or more commonly the curd-breaker. This implement is made of wire-work, in an oval form, and has a rim of tin round it, about an inch and a half broad. It cuts the curd by being passed through it perpendicularly, and at first *very, very* gently, in different sections, so that the whole mass is seperated into very small portions. For a 60 lb. cheese, this operation takes twenty or twenty-five minutes. The curd is then left for a quarter of an hour to separate from the whey, and, if the weather is cool, a cover is put over the tub to retain the heat. After the separation of the curd, which falls to the bottom, a portion of the whey at the top is taken out by the portable brass or tin-pan being pressed into it, and emptied into the set-pan ; the curd is then gently broken, by being raised with the hands to the surface, or by the renewed use of the curd-breaker. When the curd is brought to the top it is easily seized, and separated into small portions for the release of the whey. This part of the process takes about half an hour. After about another half an hour, or as soon as the curd is sufficiently settled, more whey is taken out, and the curd so far as its contexture will admit, drawn into one half of the bottom of the tub ; a semi-circular board is then placed on the curd, loaded with a weight of about 30 lbs. The board is perforated with holes about half an inch in diameter, for the escape of the whey. The tub is now set three or four inches atilt, to facilitate the discharge of the whey from the curd, and the skimming dish is used to lade it out. On its way to the set-pan, the whey passes through a scive, in which any curd contained in it is collected. This curd is called slip-curd, and by some dairy-maids is not returned to the tub. The weight and board are shortly removed, and such part of the curd as has been squeezed from under them is again collected on one side, and a heavier weight of 50 or 60 lbs. applied as before. As the whey is expelled from the curd, it is removed. In a quarof an hour the board is taken off again, the curd cut by intersections six or eight inches apart, and then the board replaced, doubly loaded. Sometimes the slip-curd is now added, the weight is again increased, if necessary ; care being taken to augment the pressure gradually, and to regulate it by the degree of compactness of the curd ; for, if caution is not used in this respect, both now and afterwards, a considerable portion of butyraceous matter will be forced out, to the detriment of the cheese.

The curd is again cut into square pieces, taken out of the cheese-tub, and broken a little by the hands as it is passed into the "thrusting-tub."—Sometimes a large sized cheese-vat, and at others a willow-basket, is substituted for the thrusting-tub. In this, the further extraction of the whey is continued by the application of "the screw," of which there are different kinds, but the principle is the same in all. Preference, however, seems due to the "lever press," which possesses the advantages of sinking by its own weight, and of allowing the application gradually of any degree of pressure, with less attention on the part of the dairy-maid. The thrusting-tub is round, with holes in the sides and bottom for the escape of the whey. A cheese-cloth of the coarsest kind is placed in the tub before the curd is put in. A "sinker," or strong circular board, which fits the inside of the tub, is then introduced a-top, upon which the screw or lever press is let down, and the power gradually applied. Long iron skewers are also thrust through the holes in the tub with their points upwards, and after five or ten minutes withdrawn, when they are followed by a flow of whey. The pressure is continued a little longer. The curd is now cut through with a dull knife, at distances of two or three inches ; and the edge of the curd is cut off all round, and placed in the centre. The pressure is then renewed, and gradually increased, and the skewers are again introduced, and at the end of fifteen or twenty minutes drawn out. The curd is then taken wholly out of the tub, cut into four or five pieces, and each piece broken with the hands into portions of the size of two or three cubic inches. A clean dry cloth is made use of, the curd is folded in it, and pressure and skewering are again resorted to. These operations continue till the whey is sufficiently extracted for the salting of the curd, which comes next in order.

If the milk is "set together" at six o'clock, and the coagulation is effected in an hour and a quarter, the breaking gathering, and preparation for salting, are generally accomplished by eleven or twelve o'clock. In some dairies, it is thought, the salting takes place when there is too much whey in the curd.

The proportion of salt is not regulated by any definite rule. One farmer, distinguished for improvements in agriculture, uses 1 lb. to 42 lbs. In another instance, more salt is used in summer than at other times—the average being 1 lb. for 40 lbs. of dried cheese, or about 40 gallons of milk. In autumn there is always more curd in the milk than at other seasons ; and, in wet weather, there is sometimes an increase of milk, without a corresponding augmentation of curd. Before applying the salt the curd is cut into three or four equal parts, and these are broken into smaller pieces by the hands or curd-mill. The salt is then strewed over it, and the breaking continued till the salt is well intermixed, and the curd completely crumbled. Each portion, as it is broken, is put into the cheese-vat, in which a clean cloth rather finer than the one used in the previous process, has been placed, and the curd is compacted by the hands as much as possible. The curd is allowed to rise two inches at least above the edge of the vat, and it is rounded a little in the middle. The cloth is then brought over it, and tucked in at the side of the vat with a small wooden knife. A tin or zinc hoop, or "fillet," with rounded edges, and ends unattached and lapping over, is used to support the curd protruding above the vat, and it is inserted round the inside of the top. It is pierced with small holes, and it sinks with the curd.

The vat is placed again under the screw or lever press, and the skewering repeated. The pressure is increased at intervals, and the skewers inserted in fresh places to hasten the discharge of the remaining whey, which is now termed "thrustings."

In the course of an hour from the time of salting, the curd is taken from under the screw or lever press, and out of the vat, and laid on a table. The angles of the side that was topmost in the vat are cut off, a circular piece, two or three inches deep, is often scooped out of the centre, and the

whole are broken small, and rounded up in the middle. The cloth being drawn over the curd, the vat is turned down up it; and then turning up the vat with the curd in it, the other angles and centre of the curd are similarly broken; after which the "fillet" is put on, and the screw or press applied for about half an hour or an hour. Where the lever press is employed, all the change which will now be required, is a little more weight at the end of the lever. Before turning the cheese to place it under the press, it is usual to pierce it perpendicularly with a skewer in several places, to form drains for the whey when turned. A clean cloth is applied, and a pressure of 6, 8, or 10 cwt., according to the size of the cheese, will be sufficient; this is generally accomplished by two or three o'clock in the afternoon. Smaller skewers are now used, changing their places occasionally, till about four o'clock, when they are removed; but the cheese remains half an hour longer without disturbance, for the better discharge of the whey. Then, or in the evening, it is turned, a clean cloth put over it, and the pressing continued.

On the second day, the cheese is generally turned two or three times; it is also skewered, and a clean cloth is used each time of turning. The presses employed for the two first days at least, and, if possible, during the whole process, should be within the influence of moderate heat; otherwise the discharge of the whey will be retarded, and the greater hazard incurred of the flavour of the cheese being injured by acidity, to which the whey is prone.—On the third day, the cheese is again turned once or twice, but it ought not to require any skewering. The heaviest press is now resorted to; and, for a cheese of 60 or 70 lbs. weight, a pressure of 30 cwt. will be enough. On the forth day it is usual to discontinue the pressure; but is is sometimes continued a day or two longer.

Salting and Drying Room.—There are sometimes separate rooms for salting and drying but generally one room answers for both purposes.—The salt can now be applied externally only, and if any good is done by it, the effect must be in the hardening of the coat of the cheese.

It may be questioned whether it would not be a better plan to remove the cheese direct from the press to the cheese-room. The practice of external salting, however, is commonly observed. The cheese is taken out of the vat, and a strong bandage about two inches broad, and long enough to go three times round the cheese, is put upon it with salt underneath It is fastened with strong pins, the cheese is placed on a stone or wooden shelf or bench, and salt spread on the top to within an inch or two of the edge. The cheese is turned daily, and fresh salt and a clean bandage are as often applied. Some persons continue this salting five or six days, others three weeks. The salting being completed, the cheese is well wiped or washed, a fresh bandage is put round it, and it is laid on a wooden shelf in the same room, or an adjoining one, for the purpose of being dried. It is turned once a-day, and, when considered sufficiently dry, it is removed to the cheese-room. The time for keeping the cheese in the drying-room varies from seven to twenty days, and depends on the temperature of the weather, or of the cheese-room to which it is next to be taken. In hot weather, and particularly if the cheese room is exposed to the heat of the mid-day sun, the change from a too cold drying-house is apt to cause cracks in the cheese. If these are left open, mites are soon generated, and the appearance of the cheese is hurt. In consequence, whey butter is sometimes used to fill them up. To prevent cracking, the windows of the salting and drying rooms are rarely, if ever, opened. The same is the case in the cheese-room, from which, in addition, the light is excluded. The heat of drying-rooms, it is thought, should range from 50° to 60° Fahrenheit.

When a cheese is taken to the cheese-room, it is usual to scrape and clean its exterior, and to place it, at first, in the coolest part of the room, often for a few weeks upon a shelf or bench, which is cooler than the floor, subsequently on the coolest part of the floor, and finally upon the warmest part. The bandage is continued for several weeks, and sometimes until the cheese is sold. The cheese is turned and wiped daily for three or four months at least, and afterwards every alternate day. The floor of the cheese-room is generally covered with dried rushes or wheat straw. It should be level and well washed with hot water and soft soap twice or thrice a year. The temperature should be from 60° to 65° Fahrenheit.

The industry, cleanliness, and frugality of the Cheshire dairy-maids are worthy of admiration. Their labours are great and their cleanliness not to be surpassed; and it is often to their good management that landlords are indebted for the payment of their rents.—*Journal of Agriculture*, (*Scotland.*)

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Potato-rot in Connecticut.—A correspondent of the New York Tribune says: "The potato rot, in its most putrid and offensive form, has appeared in this vicinity. In East Hast Hartford acres of potatoes are rotting in the ground; and those apparently sound, after being dug, in three to six days begin to decay. In some cases half of them will become from one-fourth to one-third literally rotten. The disease has also appeared in Farmington, (the great agricultural town on our west,) to an alarming extent.

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Both Deaf and Dumb.—The late Mrs. Jane W. was equally remarkable for kindness of heart and absence of mind. One day she was accosted by a beggar, whose stout and healthy appearance startled even her into a momentary doubt of the needfulness of charity in this instance.

"Why," exclaimed the good old lady, "you look well able to work."

"Yes," replied the supplicant, "but I have been both deaf and dumb these seven years."

"Poor man! what a heavy affliction!" exclaimed Mrs. W., at the same time giving him relief with a liberal hand.

On her return home she mentioned the fact, remarking, "What a dreadful thing it is to be deprived of such precious faculties!"

"But how," asked her sister, "did you know that the poor man had been deaf and dumb for seven years?"

"Why," was the quiet and unconscious answer, "he told me so himself."

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He that cannot forgive others, breaks the bridge over which he must himself pass, for every man hath need to be forgiven.

AGRICULTURE IN CHINA.—The great requisites in the Chinese system of agriculture are manure and water; and, to obtain these, their whole energies are devoted. The soil is rarely allowed to lie fallow, and in most parts produces two crops annually. It is assiduously pulverized, and different soils are also mixed together to improve the quality of each. They will carry sand for a long distance, to mix with clay—heavy soils and loam to put with that which appears too loose. During the few months of winter, in the southern provinces, the soil is sometimes thrown up into heaps, where it has been mixed with some vegetable matter, thus making a kind of compost, and also presenting a greater surface to the air; after which, those lands which require flooding are covered with water, and hoed and turned over until the whole surface is reduced to mud. This process has still a further fertilizing tendency. For a manure, the chinese collect everything of a vegetable or animal kind that can possibly be applied to such a purpose. Reservoirs of brick or wood are dug in the banks of the field, near a canal, into which every refuse substance is put. The principal one has a roof over it, and is plastered, that the contents may not be absorbed into the earth. Besides this principal one, large vases of stoneware are sunk in the ground, at convenient places, for the use of passing travellers. The children and poor people are continually employed in collecting refuse animal and vegetable matter with which to fill up these receptacles; the sweepings of the streets, hair from the barbers' shops, offal from the butchers, feathers, horns, and bones reduced to powder, soot, and the deposits of creeks and rivers, are all industriously gathered up and thought sufficiently valuable to be carried a great distance, especially if water-carriage is convenient. The dung of all animals is esteemed above any other kind of manure; it often becomes an article of commerce, in the shape of small cakes, which are made by mixing with it a portion of loamy earth, and then thoroughly drying them. These cakes are never applied dry, but are diluted in as much animal water as can be procured Old plaster is esteemed so valuable a fertilixer as sometimes to induce a farmer to replaster an old room that he may fertilize his fields with it. Before manure is taken out of the receptacle, in the field, it is suffered to become half putrified, in which state it is put upon the plants. Some seeds are put into manure until they have germinated, while others are planted enveloped in their appropriate manure. After the plant has grown a few inches, it is again manured with that which is much diluted. The effect is immediately apparent in an accelerated growth.—*Chinese Repos.*

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A CHEAP AND DURABLE CEMENT.—Take two parts of ashes, sifted fine and clean, three parts clay, and one of sand: these being well mixed together, add warm linseed oil and make a proper consistence to be applied with a paint-brush. This will be found useful in pointing of chimneys, stopping on the roof about chimneys, in gutters, and other places on buildings where there are leaks.—*Prairie Farmer.*

A young man in Springfield, Mass., was recently fined $20 and costs, for stealing cherries, and for mutilating the tree in the operation.

CHEAP PAINT.—An Ontario farmer gives the following recipe for a cheap paint. He says he has tried it on brick, and prefers it to oil paint, and says it will last longer on rough siding of wood than oil paint will on plain siding of boards.

Take one bushel of unslacked lime, and slack it with cold water; when slacked, add fifty pounds of Spanish whiting, seventeen pounds salt, and thirteen pounds sugar. Strain the mixture thro' a wire sieve, and it will be fit for use, after reducing it with cold water. In order to give it a good color, three coats are necessary on brick, and two on wood. It may be put on with a brush similar to whitewash. Each coat must have sufficient time to dry before the next is applied.

For painting inside walls, take as before, one bushel of unslacked lime, three pounds sugar, five pounds salt, and prepare as above.—*Gen. Farmer.*

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PREVENTING INCRUSTATION IN STEAMBOILERS.—It has been found by experiments on the Southampton (Eng.) railway, that putting muriate of ammonia, commonly called sal ammoniac, into the boiler, will prevent the incrustation or deposit on the inside of boilers, which is frequently so troublesome to engineers. About a pound of ammonia, for 1500 or 2000 gallons, is sufficient. It has been found to have no effect upon the iron whatever. In order, however, to ascertain whether this substance will answer in all cases, it will be necessary to try it in places where the water used is impregnated with different substances.

*Brit. Amr. Cult.*

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"I never knew," said Lord Erskine, "a man remarkable for heroic bravery, whose very aspect was not lighted up by gentleness and humanity."

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